## ABSTRACT

A method and apparatus for estimating elevation angle when using a broad search beam such as a cosecant-squared beam is provided. The range of a target detected during a search with a broad beam covering a broad angular search area is determined. Based on the determined range, consecutive beams are transmitted at increasing search elevation angles in the broad angular search area. Echo signals of the consecutive beams are used to determine an elevation angle estimate for the target.



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## ABSTRACT

A mechanism for combining signals of multiple radars to achieve increased range, radar sensitivity and angle accuracy is provided. A first signal beam is radiated from an antenna of a first radar in the direction of a target. A second signal beam is radiated from an antenna of a second radar in the direction of the same target. The echo signals from the first signal beam and the second signal beam are received at both radars. The echo signals received at the first radar are processed to produce first radar processed echo signals and the echoes signals received at the second radar are processed to produce second radar processed echo signals. The first and second radar processed echo signals are combined to form an aggregate value.


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